Control of Substances Hazardous to Health
H1

Relevant Legislation

Control of Substances Hazardous to Health Regulations 2002 (as amended)
Environmental Protection Act 1990
Hazardous Waste Regulations 2005
EU Regulation on Classification, Labelling and Packaging of Substances, 2008 (CLP)

General

In one form or another, the COSHH regulations have been in place since 1988. The 2002 regulations (as amended) supersede all previous versions.

COSHH lays down the essential requirements and step-by-step approach to avoid, or otherwise reduce, the exposure to substances hazardous to health. The regulations apply to substances that, under CLP, have been assigned the following descriptive pictograms. As the official hazard statements can be somewhat obscure the text appearing under each of them has been added to help users understand the nature of the hazard more easily.

Moderate hazard | *Acutely toxic* | *Corrosive* | *Health hazard* | *Flammable* | *Oxidising* | *Explosive* | *Gas under pressure* | *Harmful to the aquatic environment*

CLP supersedes the Chemicals (Hazard, Information and Packaging for Supply) Regulations (CHIP), which classified substances as:

(i) very toxic
toxic
harmful
corrosive
sensitising
irritant

(Such substances were labelled with an appropriate sign. These signs are still likely to be encountered in the foreseeable future, as establishments use up old stock).

(ii) substances that have been assigned a workplace exposure limit (WEL) - {see below for definition}

(iii) substances that have chronic or delayed effects, such as those which are carcinogenic (likely to cause cancer), mutagenic (likely to cause cell mutations) or toxic for reproduction.

(iv) biological agents which chiefly cover micro-organisms such as bacteria, viruses, fungi and microscopic parasites.

COSHH applies to a wide range of substances used directly in work activities including proprietary cleaning products, solvents, laboratory reagents, adhesives, varnishes and pesticides. COSHH also applies to substances generated during work activities, such as wood dust and fumes. Furthermore, COSHH covers naturally occurring substances such as grain dust.

However, the regulations do not apply to the following hazards that are covered by separate legislation:

- Lead
- Asbestos
- Radioactivity
- High/low pressures
- Explosion and flammable risks.

Examples of the effects of hazardous substances include:

- skin irritation or dermatitis as a result of skin contact
- asthma as a result of developing an allergy to substances used at work
- loss of consciousness as a result of being overcome by toxic fumes
- cancer, which may appear long after the exposure to the substance that caused it
- infection from bacteria and other micro-organisms

COSHH places a duty on the employer to undertake a risk assessment in order to determine what action needs to be taken to prevent employees (and others) from being exposed to hazardous substances used at work. In most cases, this takes the form of an activity-based risk assessment, which is supported by a manufacturer's safety data sheet detailing the risks associated with each hazardous substance in use. For practical purposes, risk assessments should be undertaken by managers

or nominated staff. In order to comply with the regulations the following eight steps must be followed:

- assess the risks
- decide what precautions are needed
- prevent or adequately control exposure
- ensure that control measures are used and maintained
- monitor exposure (where appropriate)
- carry out appropriate health surveillance (where appropriate)
- prepare plans and procedures to deal with accidents, incidents and emergencies (where appropriate)
- ensure that employees are properly informed, trained and supervised.

The Approved Code of Practice sets out two routes for compliance. The County Council has adopted the HSE's 'COSHH essentials' approach. These eight steps are explained in greater detail below:

Step 1- Assess the risks

The risks to health arising from hazardous substances used in workplace activities must be assessed. It is a requirement that all substances in the workplace are identified and the risks that these substances present are considered. Assessing the risks involves making a judgement as to how likely it is that a hazardous substance will affect someone's health, taking into account:

- how much of a substance is used and how people could be exposed to it
- who could be exposed to the substance and how often this could occur
- the means by which a substance can enter the body, namely by inhalation, ingestion or absorption through the skin

The person undertaking the risk assessment should have an understanding of COSHH, be able to obtain all necessary information and have the knowledge and experience to make correct decisions about the risks and the actions needed. Consequently, anyone tasked with completing a COSHH assessment must have received formal training.

Step 2 - Decide what precautions are needed

The person(s) undertaking the assessment must be able to decide what precautions are needed to remove or reduce risks to acceptable levels. If there is no risk to health or the risk is trivial then the risk assessment can be judged to be complete. However, if there are significant risks action must be taken to protect the health of employees and others who may be affected.

Except in the most trivial instances the main findings of the risk assessment should be recorded in writing using the County Council's corporate format that is very comprehensive and, for ease, is supported by detailed step-by-step guidance. The assessment should be re-examined if circumstances change and reviewed in the following circumstances:

- at least every five years, though the County Council recommends this is done at least annually.
- whenever there is reason to think it is no longer valid.
- where there has been a significant change in the work.

The risk assessment form allows staff to indicate when the next review is planned.

Step 3 - Prevent or adequately control exposure

Prevent exposure

It is a requirement of COSHH that exposure to hazardous substances is prevented or adequately controlled. In order to prevent exposure and if it is reasonably practicable to do so an employer might:

- change the process or activity so that the hazardous substance is not needed or generated (eliminate).
- substitute the substance with a safer alternative.
- use the substance in a safer form.

Adequately control exposure

If prevention is not reasonably practicable, exposure must be controlled using one or more of the following measures:

- Use appropriate work processes, systems and engineering controls, and provide suitable work equipment and materials, for example use processes which

minimise the amount of material used or produced or equipment which totally encloses the process.

- Control exposure at source, for example by using local exhaust ventilation (LEV) and reduce the numbers of employees exposed to a minimum, the level and duration of their exposure and the quantity of hazardous substances used or produced in the workplace.

- Provide personal protective equipment (PPE) but only as a last resort and never as a replacement for other control measures.

Meaning of 'adequate control'

'Adequate control' of exposure to a substance hazardous to health means:

- Applying the eight principles of good practice set out in schedule 2A of COSHH

- Not exceeding the workplace exposure limit (WEL) for the substance (if there is one)

- If the substance is known to cause cancer, heritable genetic damage or asthma, reducing exposure to as low a level as is reasonably practicable

The Health and Safety Executive has assigned a Workplace Exposure Limit (WEL) on a range of commonly used hazardous substances

A WEL is the maximum concentration of an airborne substance averaged over a reference period of time to which employees may be exposed by inhalation. WELs are set at a level beyond which there is positive evidence of adverse affects to human health, and are listed in EH40/2005 Workplace Exposure Limits'

Correctly applying the principles of good practice will mean exposures are controlled below the WEL

While the WEL is a limit that should not be exceeded, there is an overriding duty to ensure adequate control and to reduce exposures as far as possible. This is especially important for substances that are respiratory sensitisers, carcinogens or mutagens.

Step 4 - Ensure that control measures are used and maintained

Physical controls must be kept in efficient working order and good repair. Engineering controls and respiratory protective equipment (RPE) must be examined and, where appropriate, tested at suitable intervals. Local Exhaust Ventilation (LEV) must be examined every 14 months and records kept for five years. RPE must be

'thoroughly examined' at least every month, and more frequently when the conditions are particularly severe.

Employees are required to make full and proper use of the control measures and should, in particular:

- use the control measures provided for materials plant and processes.
- wear, in a proper manner, the PPE provided.
- store PPE when not in use in the accommodation provided.
- remove any PPE before eating, drinking or smoking.
- practise a high standard of personal hygiene and make proper use of the facilities provided for washing, showering or bathing and for eating and drinking.
- report defects promptly.

Step 5 - Monitor exposure

The concentrations of hazardous substances in the air breathed in by workers must be measured if the assessment concludes that:

- there could be serious risks to health if control measures failed or deteriorated.
- the WEL might be exceeded.
- control measures might not be working properly.

Personal air monitoring must be sampled from the breathing zone.

Step 6 - Undertake Appropriate Health Surveillance

Health surveillance must be carried out in the following circumstances:

- where the employee is working in one of the processes listed in Schedule 6 of COSHH (these principally involve the manufacture of extremely hazardous substances and are not likely to be encountered in local government).
- where employees are exposed to a substance linked to a particular disease or adverse health effect and there is a reasonable likelihood under the conditions of the work of that disease or effect occurring and it is possible to detect the disease or health effect.

Health surveillance might involve examination by a doctor or trained nurse. A health record of any surveillance carried out must be kept for at least 40 years.

Step 7 - Prepare plans and procedures to deal with incidents and emergencies

This step applies where the work activity gives rise to extraordinary risks. As a result, it necessitates the need to plan for an emergency response and this will entail preparing procedures and setting up warning and communication systems to enable an appropriate response immediately. Emergency arrangements need to be available to those who need it and 'safety drills' need to be practised.

If an emergency incident should occur immediate steps must be taken to minimise the harmful effects, restore the situation to normal and inform employees that may be affected.

Step 8 - Ensure that employees are properly informed, trained and supervised

Employees must receive suitable information and training about:

- the name and nature of the substances they work with or are exposed to and the risks created by such exposure, and access to any data sheets that apply to those substances
- The main findings of the risk assessment
- the precautions they should take to protect themselves and others
- how to use PPE provided
- the results of any exposure monitoring and health surveillance (whilst ensuring that personal confidentiality is maintained)
- emergency procedures.

Arrangements within Each Directorate

Assessment and Precautions

In the first instance it is advisable that each Directorate takes the following course of action:

- conduct a survey of **all** substances in use.
- evaluate the need for each substance.
- if reasonably practicable, replace hazardous substances with safer alternatives.
- dispose of all unwanted substances (further advice is given below).
- contact the suppliers or manufacturers to obtain safety data sheets for all hazardous substances used. Suppliers and manufacturers must provide safety data sheets free on request. The County Council has placed restrictions on the use of certain chemicals, for further information contact the Corporate Health and Safety Team
- complete a COSHH risk assessment.

The Health and Safety Team has devised a corporate risk assessment form (revised in August 2015 to take account of CLP). This can be used to assess the majority of activities, processes and chemical products used in the Directorates. The form contains guidance that will enable experienced staff to conduct their own straightforward risk assessments and maintain records. A copy, with guidance on its completion, appears at the end of this policy section.

Obsolete, Redundant and Waste Chemicals

During the survey and evaluation process chemicals may be identified for replacement, or they may have become redundant or obsolete. Any such waste chemicals should be disposed of in the correct manner. The Waste Management Team at County Hall can provide further information on competent companies which can provide a disposal service, if required. The Waste Management Team can be contacted on 0345 600 6400.

COSHH Risk Assessment No:

Northumberland County Council

Department:	Establishment/Team:
Name of substance, manufacturer and safety data sheet reference.	
Describe the activity or process *(Include how long and how often this is carried out and the quantity of substance used. A copy of a current safety data sheet (SDS) for the substance should be attached to this assessment and cross-referenced when completing it).*	
Specify where the activity or process is being carried out	

Identify the persons at risk:	Employees *(including trainees)* ☐	Contractors ☐	Public *(including students)* ☐

Hazard(s)

Physical Nature of Hazard - SDS Section 9.1

☐ Liquid ☐ Dust ☐ Solid ☐ Fume ☐ Mist ☐ Vapour ☐ Gas ☐ Other (state) _____

Classification of Hazard - SDS Section 2.2

Moderate hazard	*Acutely toxic*	*Corrosive*	*Health hazard*	*Flammable*	*Oxidising*	*Explosive*	*Gas under pressure*	*Harmful to the aquatic environment*
☐	☐	☐	☐	☐	☐	☐	☐	☐

Risk(s)

Signal Word - SDS Section 2.2	Add Hazard Statement(s) - SDS Section 2.2
Warning ☐ **Danger** ☐	

Route of Exposure - SDS Section 2.2

☐ Inhalation ☐ Ingestion ☐ Skin Contact ☐ Contact with Eyes ☐ Other (state)_____

Risks to Health – Most Important Symptoms and Effects - *Refer to safety data sheet (attached)* SDS Section 4.2

Workplace Exposure Limits (WELs) *please indicate n/a where not applicable* - SDS Section 8.1

Long-term exposure level (8hrTWA):	Short-term exposure level (15 minutes):

Control Measures: *(for example extraction, ventilation, training, supervision)* - SDS Section 8.2

First Aid: Recommended Actions - SDS Section 4.1

Inhalation:

Ingestion:

Skin Contact:

Contact with Eyes:

Other: n/a

Is health surveillance or monitoring required? Yes ☐ No ☐

Personal Protective Equipment *(state type and standard)* - SDS Section 8.2

 ☐ Dust Mask		 ☐ Visor	
 ☐ Respirator		 ☐ Goggles	
 ☐ Gloves		 ☐ Overalls	
 ☐ Footwear		 ☐ Other	

Storage Arrangements - SDS Section 7.2

Disposal of residual waste and Containers - SDS Section 13.1 and guidance

Hazardous Waste ☐ Skip ☐ Return to Depot ☐ Return to Supplier ☐ Other (state) ☐

(If Other Please State):

Firefighting measures, accidental release measures, toxicological information and ecological information are provided in the safety data sheet (attached).

Is exposure adequately controlled?	**Yes** ☐	**No** ☐

Risk Rating After Implementation of Control Measures (see guidance)

High ☐	**Medium** ☐	**Low** ☐
Assessed by:	Date:	Review Date:

Guidance on Completing the COSHH Risk Assessment Form

Risk assessment number.	Enter a suitable identification number.
Department.	Enter the name of the Department.
Establishment/Team.	Enter the name of the establishment/Team which is carrying out the activity or process.
Name the substance involved, the manufacturer and the safety data sheet reference number.	Give the name of the substance being use and its manufacturer. In most cases there will only be one substance involved. If more than one is being used, complete a separate assessment sheet with the same reference number and a suitable additional suffix, such as a, b, c etc. A safety data sheet (SDS) provides important information on many aspects of the substance in use. It is important that a current up-to-date version (conforming to the CLP Regulation) is attached to the risk assessment. Give the data sheet number and date of publication, if known, for example: Leoclean SDS 75 20/10/14. Do not enter the address of the product's manufacturer, as this information is in the safety data sheet and reproducing it at this point takes up unnecessary space.
Describe the activity or work process	Give a simple description of what the activity or process is, for example cleaning floors and walls. State any equipment used in carrying out the activity or process, for example cloth, spray or tank and the quantity of the substance in use. Where the process involves more than one substance, verify that all of them are compatible with each other. Manufacturers should be consulted to verify that there will be no adverse reaction between the substances to be used in the process. In some cases it may not be acceptable even to store incompatible substances together.
Specify where the activity or process is being carried out.	State exactly where the activity or process is taking place, for example Maintenance Workshop Number 2.
Identify the persons at risk.	Tick the appropriate boxes.
Physical nature of hazard. *(SDS Section 9.1)*	Identify the physical nature of the hazard that is involved in or arising from the particular process. Tick all boxes that apply, for example liquid, dust, vapour.
Classification of hazard. *(SDS Section 2.2)*	Tick the relevant boxes to indicate the appropriate categories that apply after referring to the safety data sheet and/or container.
Signal word. *(SDS Section 2.2)*	Tick the relevant box. There are two signal words: 'Warning' and 'Danger'; only one will apply.
Hazard statement. *(SDS Section 2.2)*	Enter the Hazard Statement(s) from the SDS. Only cite the H phrases; do not write the H or EUH numbers.
Route of exposure. *(SDS Section 2.2)*	Indicate the routes by which the substance could enter the body.

Risks to health – Most important symptoms and effects. *(SDS Section 4.2)*	Pertinent information relating to the most important acute and chronic symptoms and effects experienced when engaged in the process/activity or arising from the use of the substance is usually given in the first aid section of the safety data sheet, under heading 4.2.
Workplace Exposure Limits (WEL). *(SDS Section 8.1)*	Check the manufacturer's safety data sheet to see if the substance has been assigned a WEL. If it has, the long-term and short-term limits should be stated. In some instances workplace monitoring may be necessary.
Control Measures. *(SDS Section 8.2)*	Identify all the controls required to reduce the risks associated with the use of the substance (other than personal protective equipment). The information is usually provided in section 8.2 of the SDS. Be very specific; if ventilation is required then the type should be documented, for example local exhaust ventilation with partial enclosure. If training is identified as a control then the level or standard of training required should be stated, for instance 'Pesticides PA1'. Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by the employees of another employer. Where a WEL has been assigned then the method for monitoring that the levels are not exceeded should also be stated, for example: personal monitoring.
First aid – recommended actions. *(SDS Section 4.1)*	State the emergency action that is to be taken. Other than the standard first aid box, stipulate what additional equipment will be needed, such as an eye irrigation tube.
Is health surveillance or monitoring required?	The use of specified substances or the undertaking of certain processes may require some employees to have their health monitored. This may take the form of simple observations made by a Supervisor, as is the case for monitoring dermatitis from using oil. Alternatively, it may require the Occupational Health Unit (OHU) to carry out more complex monitoring, such as lung function tests to check the effects of dust or fumes on the lungs. If there is any doubt over the requirements for health surveillance then the OHU should be contacted.
Personal Protective Equipment (PPE). *(SDS Section 8.2)*	Any PPE required for use with a particular substance should be identified. Tick all appropriate boxes and then specify the type and standard of equipment to be used, for example eye protection - goggles to BS EN 166 - 349B.
Storage. *(SDS Section 7.2)*	Indicate how and where the substance is stored. Ensure that there is a suitable storage area for used cylinders.
Disposal of residual waste and containers. *(SDS Section 13.1)* *The SDS tends to be rather vague and generalised in respect of disposal. The guidance in the adjacent box is more detailed and specific).*	Detail how waste substance is to be disposed of and remember to consider the containers as well, as these may contain hazardous residues. Ensure that risks to the environment are considered. Any residual product or heavily contaminated containers must be classed as hazardous waste. The waste will be categorised as flammable, corrosive, toxic etc. and, therefore, a specialist waste contractor must be used to dispose of it and a consignment note must be completed. Further advice should be sought from a waste disposal company or the County Council's Waste Management Team on 0345 600 6400. Gas cylinders should usually be returned to the supplier for re-use. Ensure that this arrangement is in place when purchasing gas. Sometimes it is appropriate to return empty containers, such as 205 litre oil

	drums to the supplier. If such an arrangement is in place, these should be returned to the depot to await collection. Other empty containers, for example, detergent bottles and clean cardboard boxes can be placed into the appropriate recycling bin for the specific type of waste, such as plastic, metal or cardboard. As a last resort, where no recycling facility is available, empty containers (free from any residual product) can be disposed of via the general waste skip or bin. Local waste disposal procedures and instructions should be consulted.
Is exposure adequately controlled?	Tick the appropriate box.
Risk rating following the implementation of control measures.	Having implemented the appropriate control measures, apply the risk rating to indicate whether the risks are low, medium or high.
Assessed by and date.	Enter the date when the assessment was carried out. Sign and date the risk assessment. Please ensure that the signature is legible.
Review date.	Enter the date when a re-assessment should be undertaken. This will normally be one year after the first assessment. However, high-risk processes may need to be re-assessed more often. In addition, if any of the elements of the process/activity alter then the re-assessment should be carried out immediately.